

STORMWATER MANAGEMENT

BI-ANNUAL REPORT 2018

THE CITY OF NEW ROCHELLE

ENVIRONMENTAL PROTECTION AGENCY

ADMINISTRATIVE ORDER

CWA 02-2015-3034

Prepared for & by:

THE CITY OF NEW ROCHELLE

Department of Public Works

City Hall

515 North Avenue

New Rochelle, NY 10801

914-654-2130

June 29, 2018

TABLE OF CONTENTS

	PAGE
LIST OF TABLES.....	ii
OBJECTIVES	1
EXECUTIVE SUMMARY	2
1.0 INTRODUCTION	3
2.0 SSES PRE-INSPECTION ANALYSIS	4
3.0 SSES LINED SANITARY SEWER LOCATIONS WITH LENGTHS	6
4.0 SANITARY SEWER REPAIR LOCATIONS WITH LENGTHS	7
5.0 RECOMMENDATIONS	8
6.0 CONCLUSION	9

APPENDIX A – QUALITY ASSURANCE / QUALITY CONTROL PROCEDURES

APPENDIX B – MAP OF OUTFALL LOCATIONS

OBJECTIVES

The City of New Rochelle's long term objective is to establish Quality Assurance (QA)/ Quality Control (QC) protocols for the detection and elimination of fecal coliform and total coliform in storm water drains. These procedures can be used to eliminate any health risk associated with fecal coliform and total coliform and water contact. Goals addressed in the present report include maintaining a schedule to eliminate the impact, continue to investigate and eliminate any illicit discharges and maintain a healthy storm water system within the City of New Rochelle.

Accomplishments of the main objectives include:

- Dry weather outfall surveillance
- Sample data collection as noted in the EPA
- Track – down of the questionable system outfalls
- Video televising and reporting to eliminate illicit sanitary connections
- Complete remediation work to eliminate illicit discharges
- Repair and rehabilitate the sanitary sewer lines identified under the Sanitary Sewer Evaluation Study (SSES).

EXECUTIVE SUMMARY

The City of New Rochelle (City) acknowledges that the healthy maintenance of the storm water system is important for the vitality of all residential, recreational and commercial areas along its waterways. This Environmental Protection Agency's (EPA) Administrative Order (AO) Clean Water Act (CWA) 02-2015-3034 issued to the City of New Rochelle presents viable regulations that need to be adhered to so that any and all corrective actions are taken to eliminate illicit connections, to minimize discharges and sources of pathogens in the City of New Rochelle's storm water system.

The City has completed the inspection of the entire sanitary sewer system. Severe defects have been identified that can cause contamination or pollution of groundwater through the storm- sewer system. The City's Sanitary Sewer Evaluation Study (SSES) identified and ranked these defects. Section 3.0 lists and provides details of the 10 major defect identified locations that were lined during this reporting period. Due to the winter weather conditions, no new sampling was conducted for this Bi-Annual period.

The City through the Department of Public Works division of Sewers and Drains also maintains all catch basins that lead into storm drains with regularly scheduled cleaning and maintenance. A televising and recording company is contracted to provide their services in investigating any illicit connections along the storm water system and its outfalls.

1.0 INTRODUCTION

The City of New Rochelle's Department of Public Works provides and maintains the City's physical facilities, providing the following services through its various operations bureaus: Municipal Engineering; Traffic Engineering; Storm Water Management; Maintenance, Repair and Construction of Sewers and Drains; Cleaning of Streets and Highways; Collection and Disposal of Refuse; Collection and Disposal of Recyclable Material; Maintenance, Repair, Construction, Reconstruction and Resurfacing of Streets; Maintenance of City-Owned Trees; Removal of Ice and Snow from Public Thoroughfares; Leaf and Yard Waste Removal and Recycling; Maintenance of City-Owned Building and Structures; and Maintenance of City Vehicles other than Fire Trucks. The Department is the third element of the City's Emergency Management Response effort.

The City of New Rochelle will continue the performance of the tasks as noted within the Administrative Order. The City of New Rochelle's Department of Public Works Engineering will measure the outfalls noted in the Administrative Order, sample, track down, locate "Hot Spots", dye test homes and verify their connections. The City will continue to perform track down along the Boston Post Road/Stephenson Boulevard Outfall line since the repair and rehabilitation of the sanitary sewer lines are complete. Boston Post Road/Stephenson Boulevard Outfall line covers 2,013 acres of the City's 7,552 total acres. This outfall line is the largest within the City which requires more time to investigate. Rehabilitation and sewer repairs will be commenced when confirmed pollution sources are identified.

2.0 SANITARY SEWER EVALUATION STUDY (SSES)

PRE-INSPECTION ANALYSIS

The SSES was conducted in 2017 to investigate the health of the City's sanitary sewer lines. Under this study various locations of sanitary sewer lines were found in need of repair and rehabilitation. A contract was publically posted for the repair and rehabilitation of these lines with the use of a liner. The contractor awarded the sewer lining project was En-Tech Corp. under the City's DPW Contract No. 02-999-P22. The work began in the first quarter of the 2018 year. The sewer inspection work was officially completed in the second quarter of 2018. The locations of the sewer lining repairs have been identified. Listed below are the areas of sewer repair which flow along the Boston Post Road/Stephenson Boulevard Outfall line.

This summary encompasses 10 locations for the sanitary sewer lining project awarded to En-Tech Corp.



EN-TECH CORP
91 Ruckman Rd
Closter New Jersey 07624
(201)784-1034

Project Summary

Project Name: 16-056								
US MH	DS MH	Pipe ID	Date	Street	Material	Size	Total	Insp
78896	78895		5/4/2018	PETERSVILLE RD	Vitrified Clay Pipe	8	306 ✓	304.7
79060	79059		5/2/2018	MANHATTAN AVE	Vitrified Clay Pipe	8	253 ✓	256
79060	79059		5/10/2018	MANHATTAN AVE	Vitrified Clay Pipe	8	253	253
78678	78677		5/4/2018	VAN GUILDER VE	Ductile Iron Pipe	8	246 ✓	245.8
80231	80230		5/4/2018	NORTH AVE	Cast Iron	8	51 ✓	50.3
70282	70281		5/2/2018	CAROL LN	Vitrified Clay Pipe	8	259.1	259.1
80946	80945		5/2/2018	FOREST AVE	Vitrified Clay Pipe	8	251	252.3
79307	79305		5/2/2018	DEWEY AVE	Vitrified Clay Pipe	8	223.1	223.3
79307	79305		5/21/2018	DEWEY AVE	Vitrified Clay Pipe	8	223.1	223.1

Pipe Size: 8

Total Ln.: 1589.2

Inspected Ln.: 2067.6

US MH	DS MH	Pipe ID	Date	Street	Material	Size	Total	Insp
80757	80756		5/2/2018	PINEBROOK BLVD	Ductile Iron Pipe	10	185	188.4

Pipe Size: 10

Total Ln.: 185

Inspected Ln.: 188.4

US MH	DS MH	Pipe ID	Date	Street	Material	Size	Total	Insp
79032	79031		5/4/2018	PALMER AVE	Cast Iron	12	56	54.5
80232	80231		5/4/2018	NORTH AVE	Ductile Iron Pipe	12	151	151.3

Pipe Size: 12

Total Ln.: 207

Inspected Ln.: 205.8

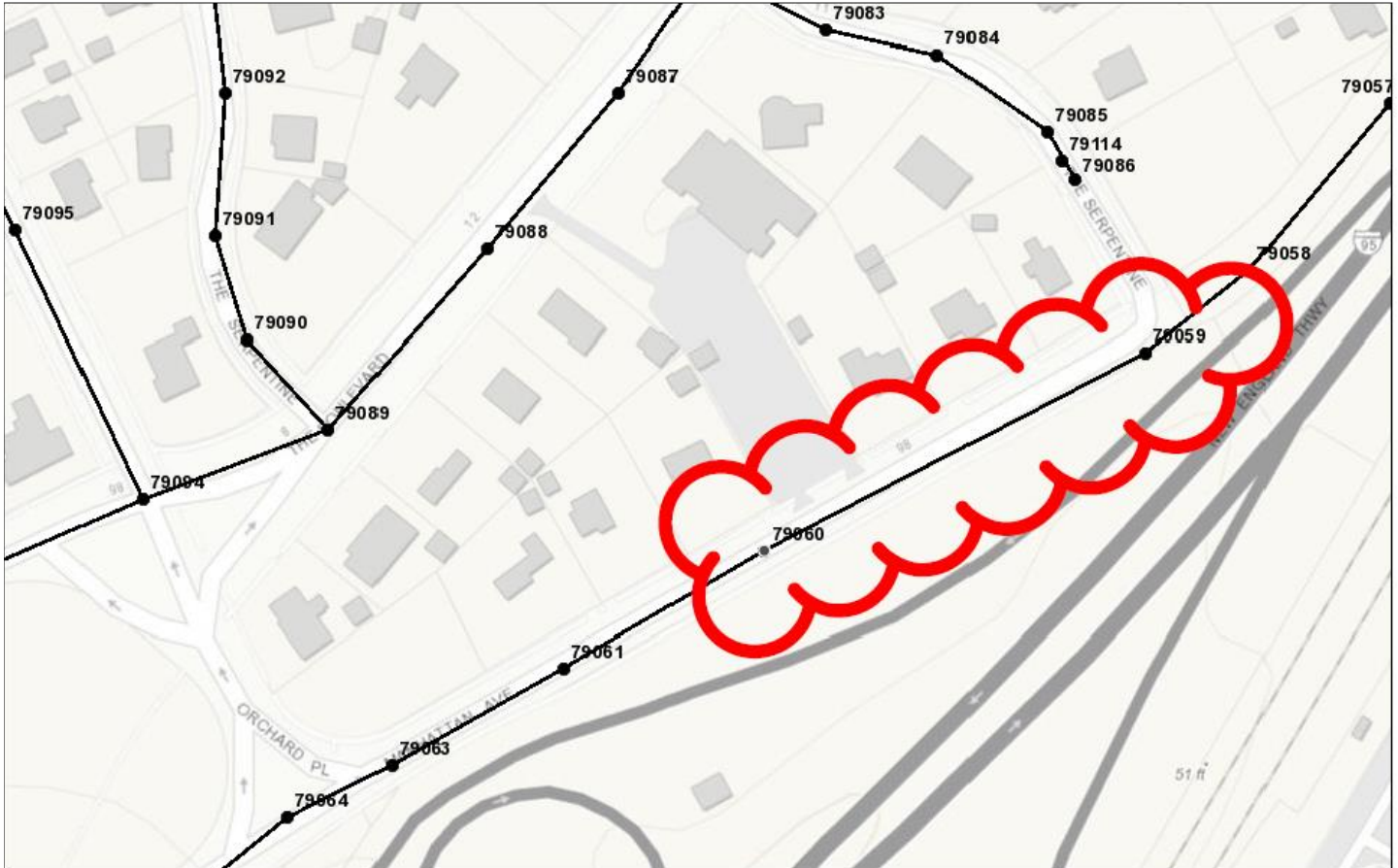
Project Total Ln.: **1981.2**

Project Inspected Ln.: **2461.8**

2.0 SANITARY SEWER EVALUATION STUDY (SSES)

PRE-INSPECTION ANALYSIS

263 LF of MANHATTAN AVE MH 79060 - 79059



April 13, 2018

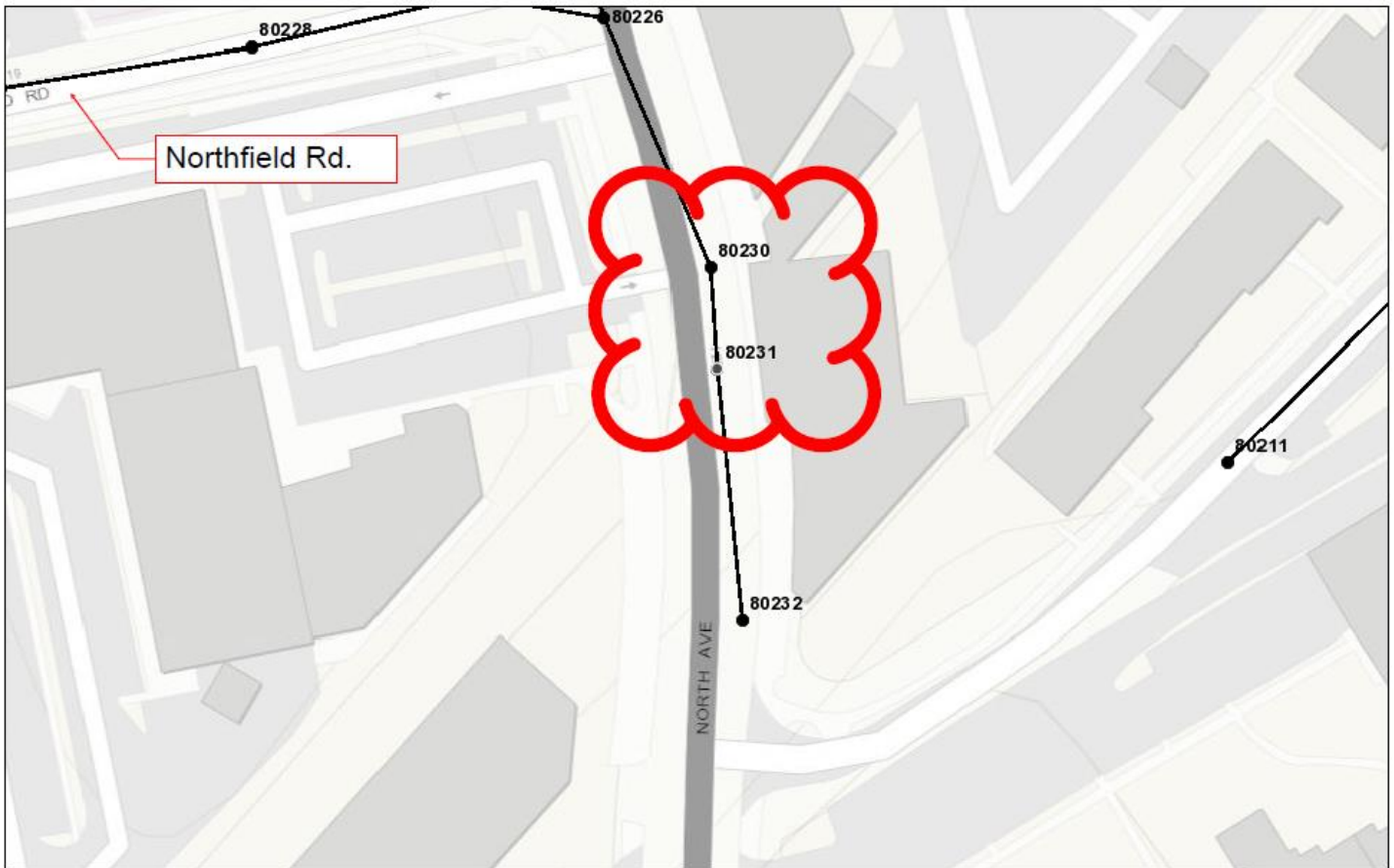
Sanitary Sewer Manholes	Yes	CCTVConditions	Brickwork	Crack	Fracture
• <all other values>	ssGravityMain	Other	Broken	Deformed	Grout Test and Seal
• <Null>	TelevisedMains	Access Points	Collapse	Deposits	Hole

0 0.01 0.03 0.05 mi
0 0.02 0.04 0.09 km
1:1,708
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Web AppBuilder for ArcGIS

2.0 SANITARY SEWER EVALUATION STUDY (SSES)

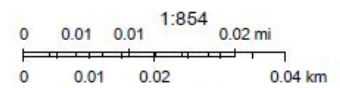
PRE-INSPECTION ANALYSIS

51 LF of NORTH AVE MH 80231 – MH 80230



April 13, 2018

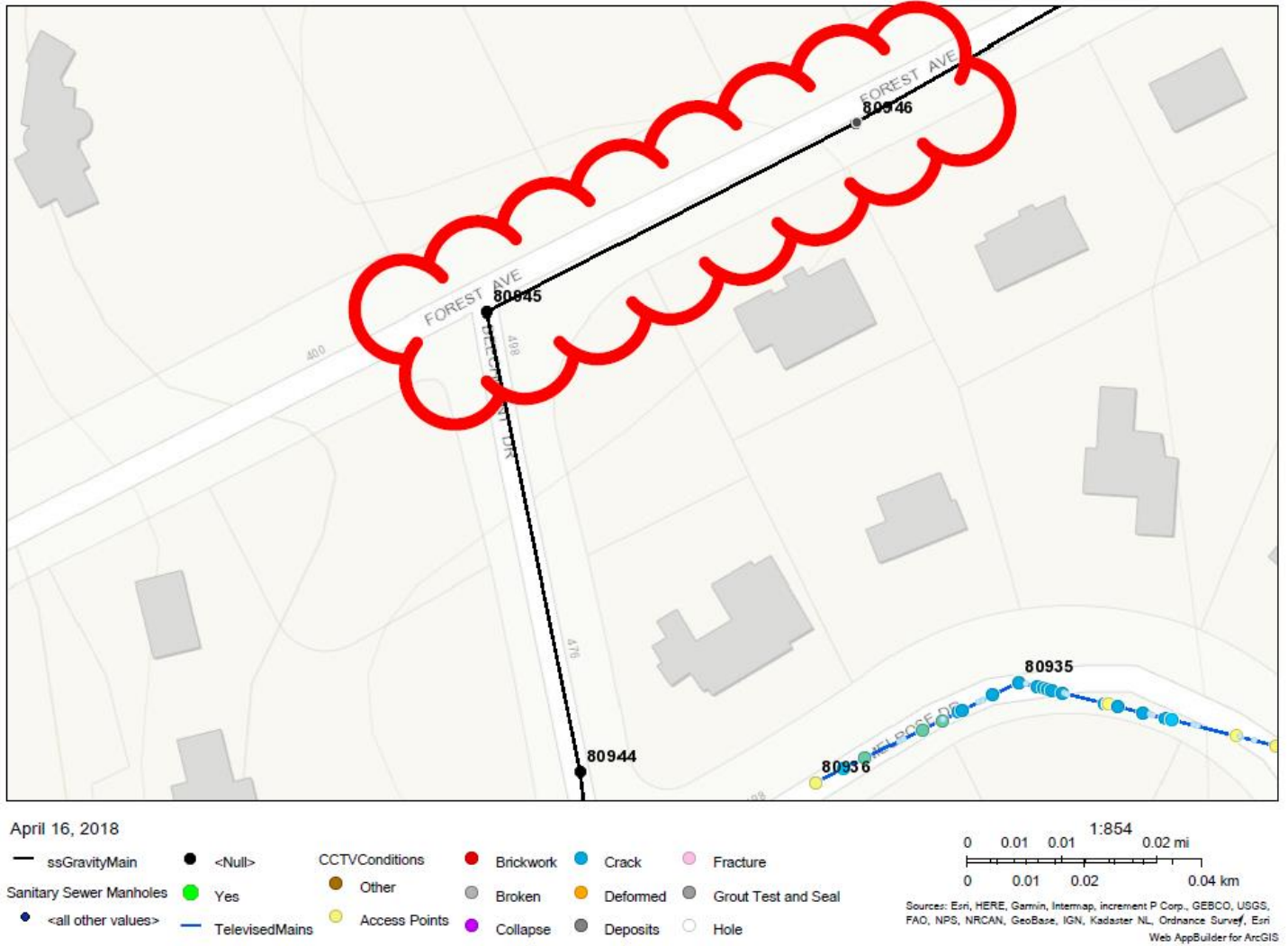
Sanitary Sewer Manholes	Yes	CCTVConditions	Brickwork	Crack	Fracture
• <all other values>	ssGravityMain	Other	Broken	Deformed	Grout Test and Seal
• <Null>	TelevisedMains	Access Points	Collapse	Deposits	Hole



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Web AppBuilder for ArcGIS

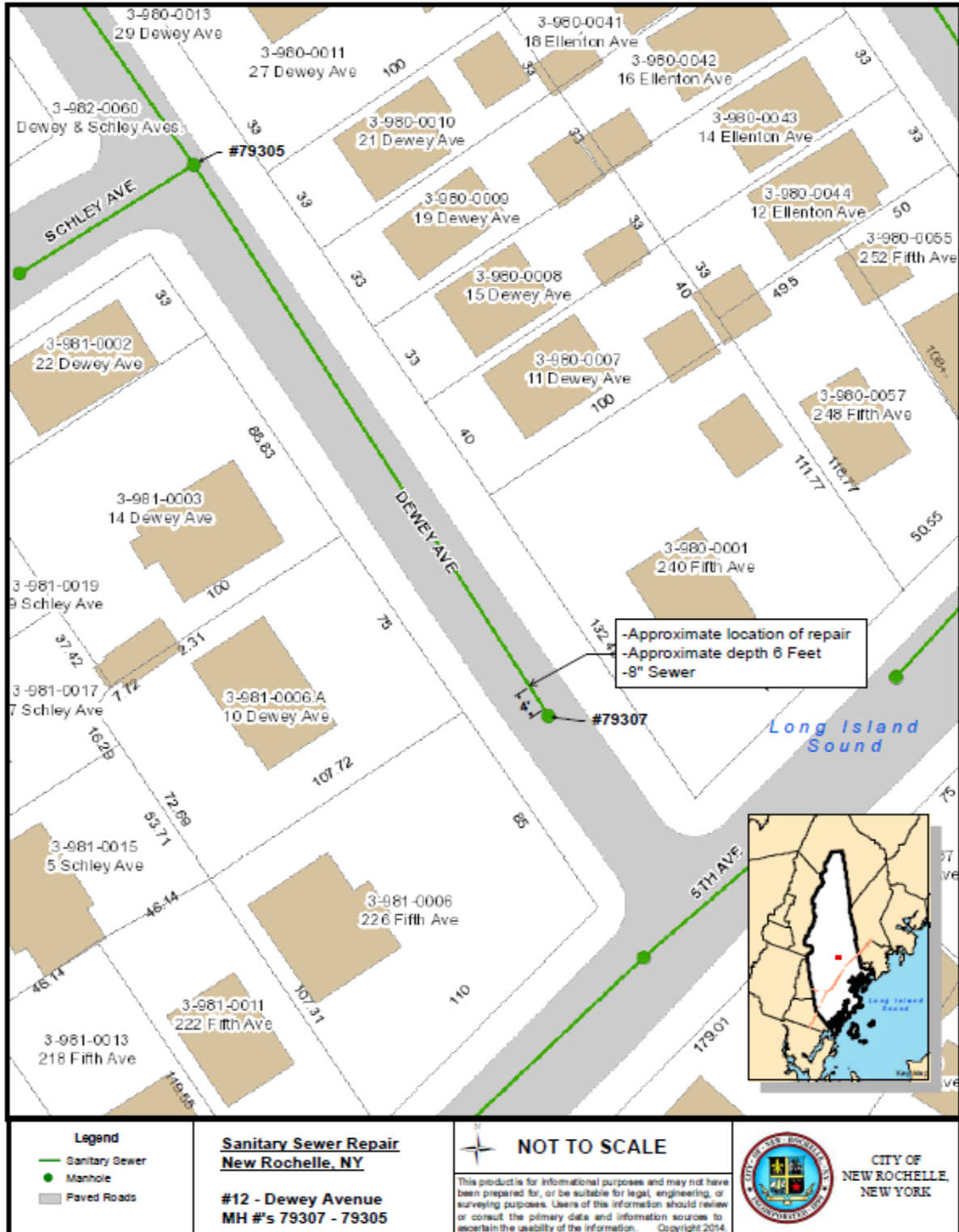
2.0 SANITARY SEWER EVALUATION STUDY (SSES)

PRE-INSPECTION ANALYSIS 251 LF of FOREST AVE MH 80946 – 80945



2.0 SANITARY SEWER EVALUATION STUDY (SSES)

PRE-INSPECTION ANALYSIS 223 LF of DEWEY AVE MH 79305 – MH 79307



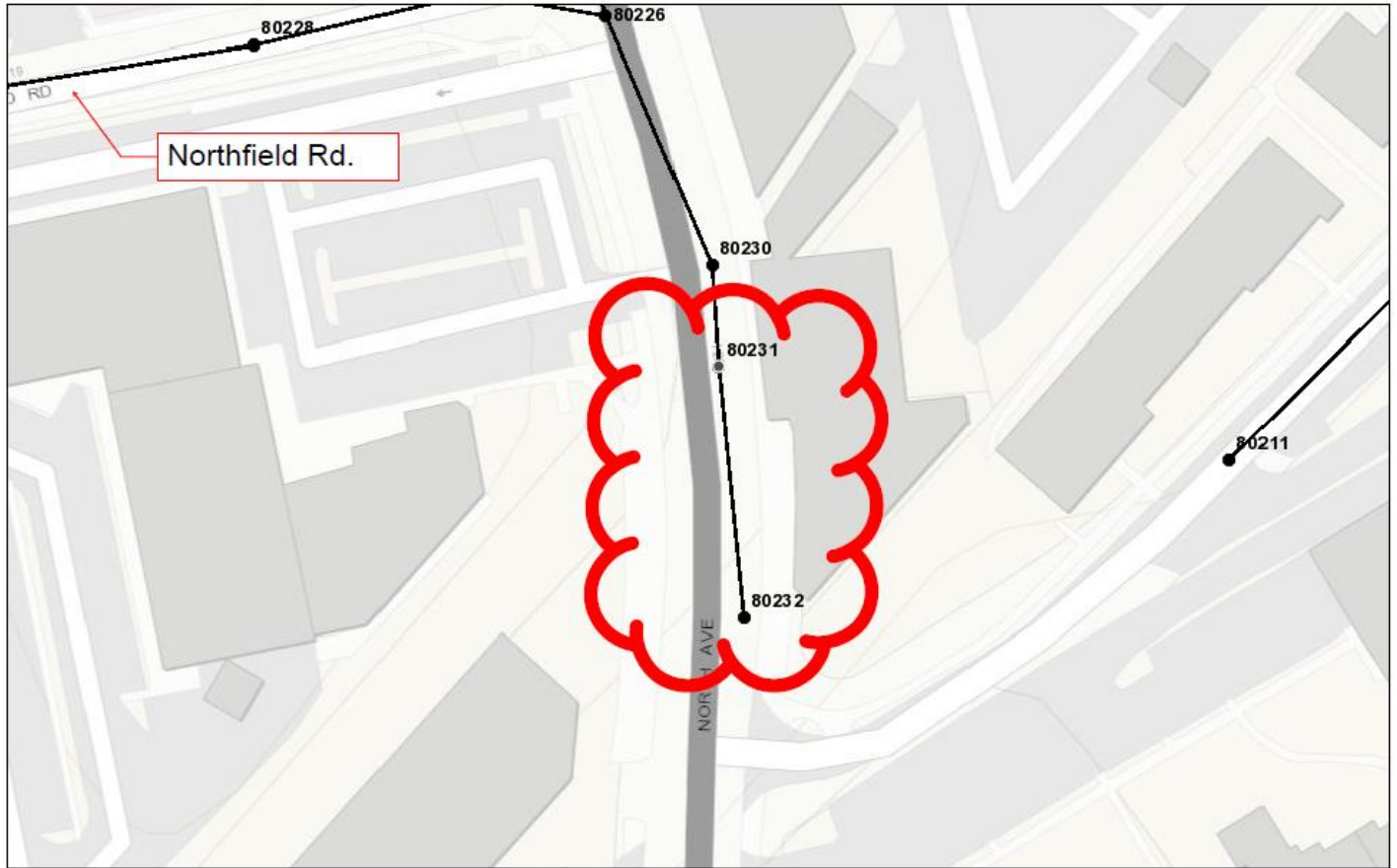
2.0 SANITARY SEWER EVALUATION STUDY (SSES)

PRE-INSPECTION ANALYSIS 56 LF of PALMER AVE MH 79032 – MH 79031



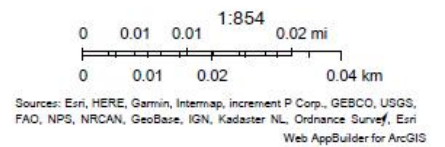
2.0 SANITARY SEWER EVALUATION STUDY (SSES)

PRE-INSPECTION ANALYSIS 151 LF of NORTH AVE MH 80232 – MH 80231



April 13, 2018

Sanitary Sewer Manholes	Yes	CCTVConditions	Brickwork	Crack	Fracture
• <all other values>	ssGravityMain	Other	Broken	Deformed	Grout Test and Seal
• <Null>	TelevisedMains	Access Points	Collapse	Deposits	Hole



3.0 SANITARY SEWER EVALUATION STUDY (SSES)

LINED SANITARY SEWER LOCATIONS

The post-inspection process resulted in the lining of all 10 locations noted in the pre-inspection locations (refer to pages 5 thru 14) noted in section 2.0 Sanitary Sewer Evaluation Study Pre-Inspection Analysis.

This summary details the post-inspection lining of 10 locations for the sanitary sewer project awarded to En-Tech Corp. Refer to pages 5 thru 14 for the maps of these locations.



EN-TECH CORP
91 Ruckman Rd
Closter New Jersey 07624
(201)784-1034

Project Summary

Project Name:		16-056						
US MH	DS MH	Pipe ID	Date	Street	Material	Size	Total	Insp
78678	78677		5/11/2018	VAN GUILDER AVE.	Cured-In-Place Liner	8	246	246
70892	70821		5/7/2018	CAROL LN	Cured-In-Place Liner	8	259	259
80231	80230		5/18/2018	NORTH AVE	Cured-In-Place Liner	8	51	51
78896	78895		5/18/2018	PETERSVILLE RD	Cured-In-Place Liner	8	306	306
79060	79059		5/10/2018	MANHATTAN AVE	Cured-In-Place Liner	8	253	253
79307	79305		5/21/2018	DEWEY AVE	Cured-In-Place Liner	8	223	223.1
80946	80945		5/21/2018	FOREST AVE	Cured-In-Place Liner	8	251	251

Pipe Size: 8

Total Ln.: 1589

Inspected Ln.: 1589.1

US MH	DS MH	Pipe ID	Date	Street	Material	Size	Total	Insp
80757	80756		5/21/2018	PINEBROOK BLVD	Cured-In-Place Liner	10	185	188.5

Pipe Size: 10

Total Ln.: 185

Inspected Ln.: 188.5

US MH	DS MH	Pipe ID	Date	Street	Material	Size	Total	Insp
79032	79031		5/17/2018	PALMER RD	Cured-In-Place Liner	12	56	55
80232	80231		5/15/2018	NORTH AVE	Cured-In-Place Liner	12	151	149.8

Pipe Size: 12

Total Ln.: 207

Inspected Ln.: 204.8

Project Total Ln.: **1981.0**

Project Inspected Ln.: **1982.4**

4.0 SANITARY SEWER REPAIR LOCATIONS WITH LENGTHS

The SSES conducted in 2017 also provided the City with locations of sanitary sewer lines that required repairs and emergency repairs. The sewer repair locations were completed in the first, third and fourth quarter of 2017.

This summary encompasses 7 locations for the sanitary sewer repairs performed by the City's DPW Sewer Crew in this spreadsheet.

Date Performed	Location	Sewer District	Contract Name	Manhole No.'s	Length of Repair (LF)	Description
9/1/2017	#4 Glenfruin Ave & Calton Rd.	New Rochelle	Sanitary Sewer Repairs Various Locations	79958 - 79957	7	Repair made downstream of Manhole # 79958 at MH. House connection encountered and reconnected.
9/5/2017	#5 Perth Ave.	New Rochelle	Sanitary Sewer Repairs Various Locations	79917 - 79915	5	Repair made 24' downstream of Manhole # 79917. House connection encountered and reconnected.
9/7/2017	#10 Overlook Circle	New Rochelle	Sanitary Sewer Repairs Various Locations	79356 - 79355	4	Repair made downstream of Manhole # 79356 at MH.
9/8/2017	#11 Howard Parkway	New Rochelle	Sanitary Sewer Repairs Various Locations	79253 - 79252	8.5	Repair made downstream of Manhole #79353 @ MH.
9/7/2017	#160 Bayberry Lane	Mamaroneck	Sanitary Sewer Repairs Various Locations	69964 - 69963	10.5	Repair made downstream of Manhole # 69964 at 180 FT.
9/12/2017	#51 Harold Ct.	New Rochelle	Sanitary Sewer Repairs Various Locations	78674 - 78672	9.3333	Repair made downstream of Manhole # 78674 at MH.
9/13/17 9/15/17	#148 Oak St.	New Rochelle	Sanitary Sewer Repairs Various Locations	79049 - 79048	7.5	Repair made 105' - 6" upstream of Manhole # 79048. House connection encountered and connected.

4.0 LINED SANITARY SEWER LOCATIONS WITH TOTAL LENGTHS

The SSES conducted in 2017 also provided the City with locations of sanitary sewer lines that required repairs and emergency repairs. The sewer repair locations were completed in the first, third and fourth quarter of 2017.

This summary encompasses 5 locations for the sanitary sewer repairs performed by the City's DPW Sewer Crew in this spreadsheet.

Date Performed	Location	Sewer District	Contract Name	Manhole No.'s	Length of Repair (LF)	Description
9/13/17 - 9/18/17	#52 Beattie Lane	New Rochelle	Sanitary Sewer Repairs Various Locations	77883 - 77882	4 8	Repair made 86' & 108' downstream of Manhole # 77883 . Two house connections encountered and connected.
9/19/17- 9/20/17	#161 Willow Ave	New Rochelle	Sanitary Sewer Repairs Various Locations	77681 - 77777	15.583	Repair made 90' downstream of Manhole # 77777 .
11/25/2016	Linwood Rd.	New Rochelle	Emergency Sanitary Sewer Repairs	80993 - 80990	12	Repair made 17' downstream of Manhole # 80993.
1/13/2017	Lawrence Pl.	Hutchinson	Emergency Sanitary Sewer Repairs	Downstream MH (Eastchester Rd)	11	Repair made 35' upstream of Manhole at Eastchester Rd . House Connection encountered and reconnected.
2/24/2017	Lawrence Pl.	Hutchinson	Emergency Sanitary Sewer Repairs	Downstream MH (Eastchester Rd)	12.91666	Repair made 51' upstream of Manhole at Eastchester Rd . House Connection encountered and reconnected.

5.0 RECOMMENDATIONS

The recommendations are to sample the storm drain lines adjacent to the repaired and rehabilitated sewer lining locations. The sampling of these locations will begin in the third quarter and continue to the fourth quarter of this year to verify that the sewer lining and the sewer repairs were effective in removing any illicit connections that could have resulted in the City's storm drain lines.

6.0 CONCLUSIONS

It is the City's intention to sample the storm drain system adjacent to the lined, repaired and rehabilitated City's sanitary sewer discharges system to ensure that the elimination of the sanitary backups or overflows has prevented the exfiltration of sanitary flow into adjacent storm drains. The City will continue to conduct illicit discharge track down activities in the largest basin (Boston Post Rd / Stephenson Blvd) to confirm and eliminate the observed contamination.

Concluding, the City will continue to maintain the health of the storm drain system as specified in the EPA Administrative Order.

APPENDIX A

QUALITY ASSURANCE / QUALITY CONTROL PROCEDURES

QUALITY ASSURANCE

The City of New Rochelle's (City) Quality Assurance (QA) process is defined by the process of managing the detection and prevention all illicit connections made to the storm water system. The Department of Public Works Engineering, Sewers and Drains divisions have been implementing several processes to obtain positive correction results to any illicit connection discovered.

The City's QA approach places an emphasis on the following aspects:

- ❖ Performance and integrity criteria
- ❖ Records identification, data collection, and data analysis
- ❖ Skills, experience and knowledge
- ❖ Infrastructure health and maintenance

The Commissioner of Public Works is the division head for this department. However, the City Engineer is the division head which oversees and manages the QA for the City's stormwater management.

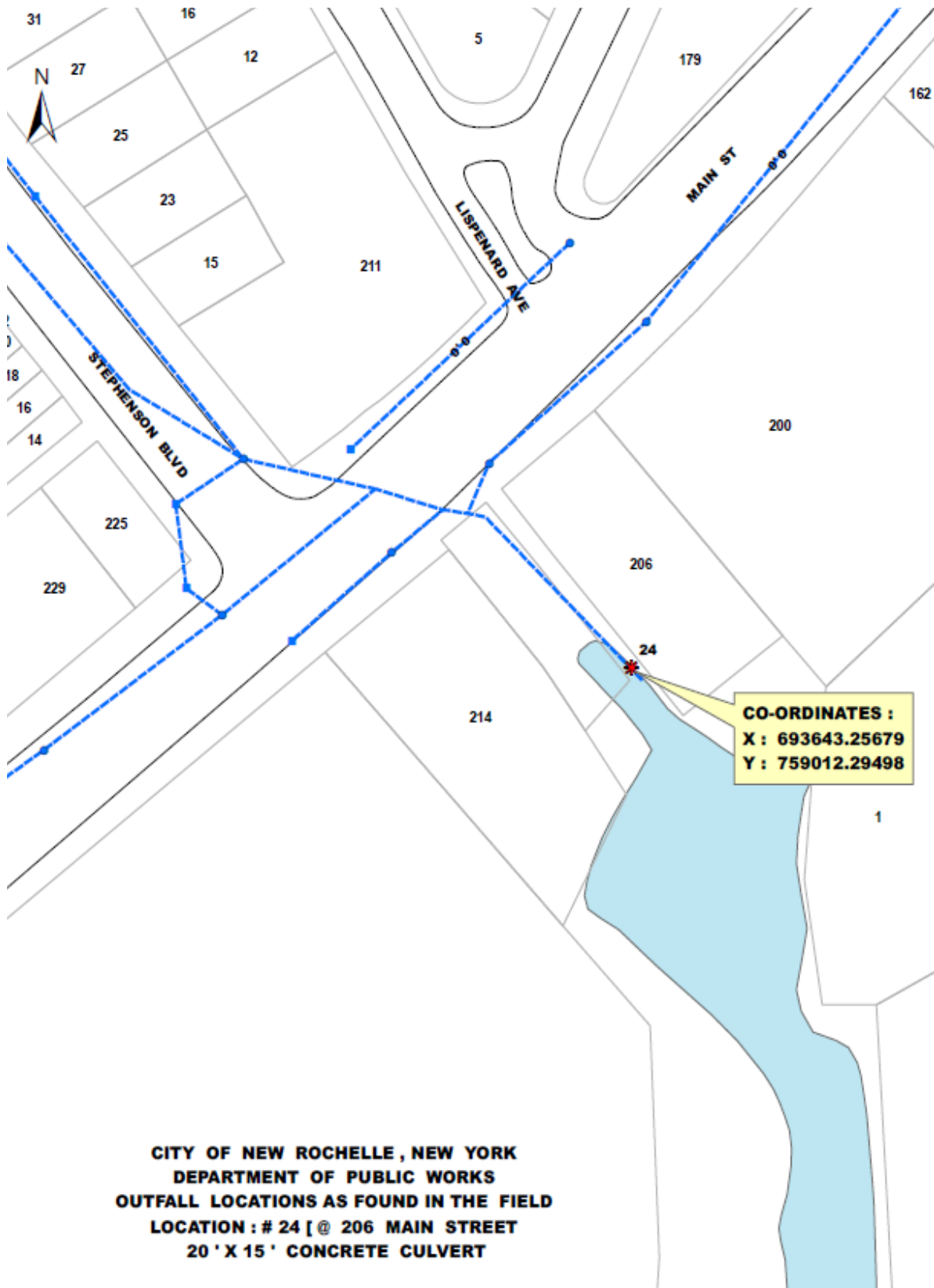
QUALITY CONTROL PROCEDURES

The City of New Rochelle's (City) Quality Control procedures (QC) process is defined by the procedure or set of procedures intended to ensure that the stormwater management process is adhered to as set under the quality criteria requirements identified in the QA.

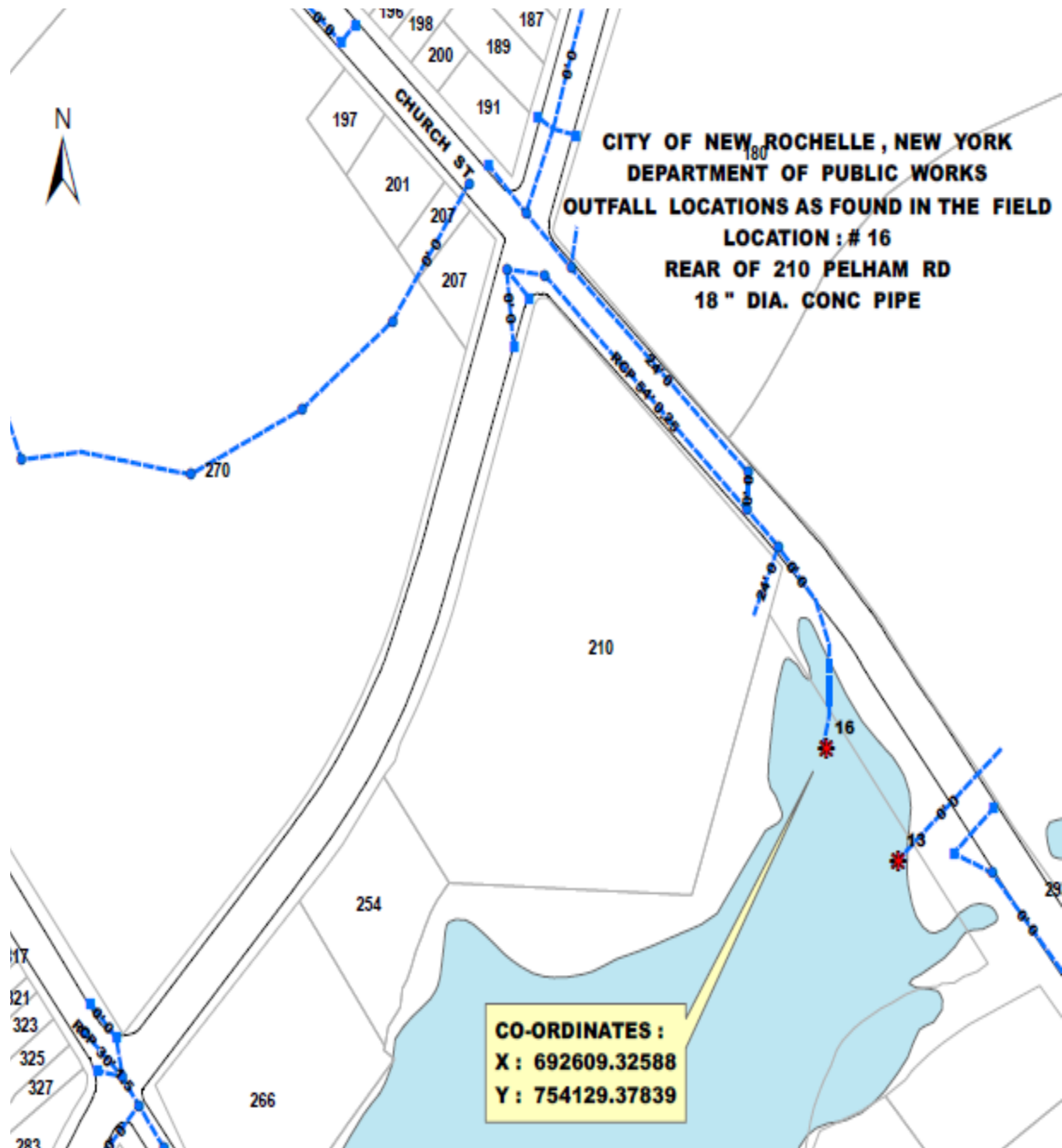
APPENDIX B

OUTFALL LOCATIONS

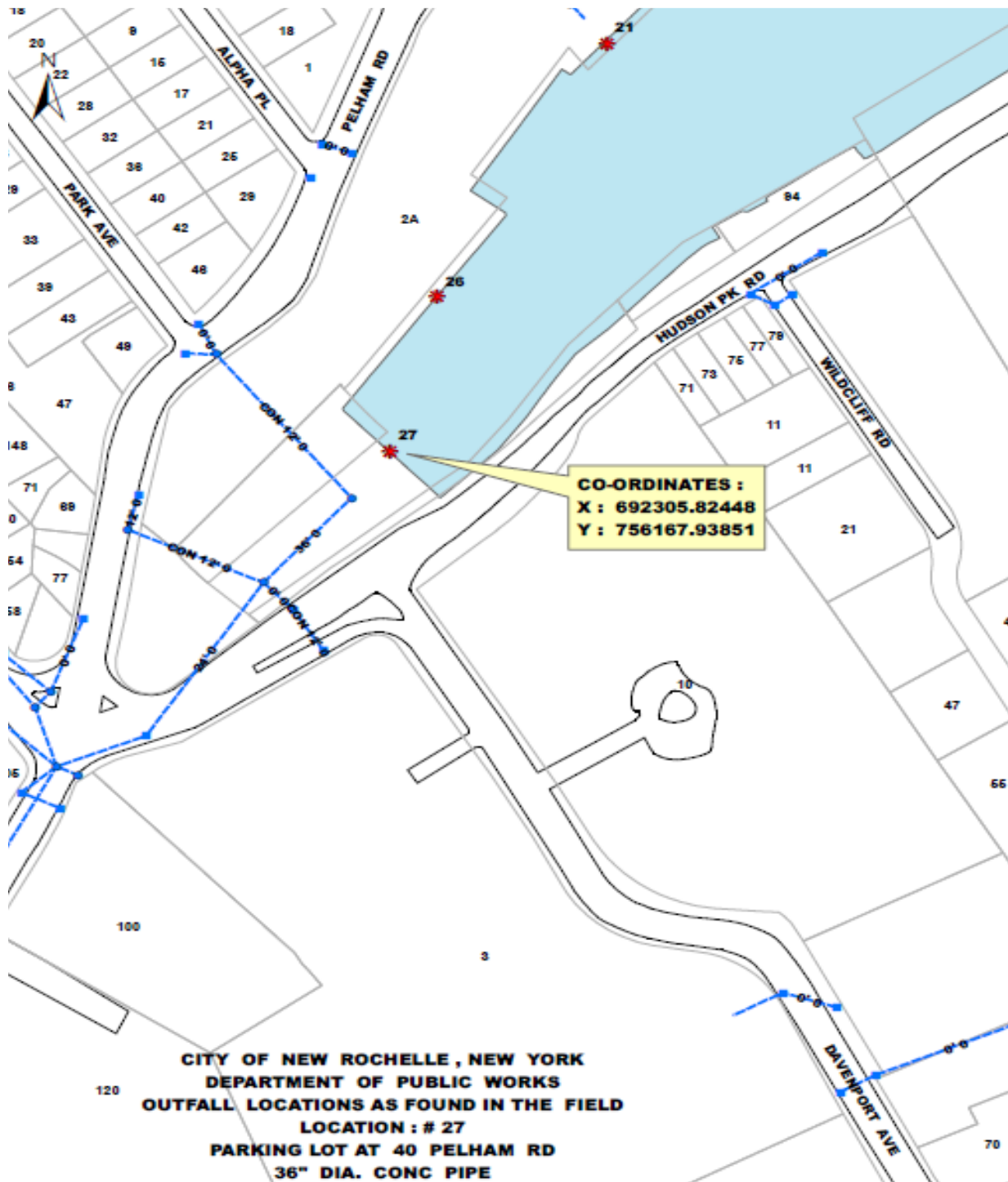
BOSTON POST ROAD / STEPHENSON BLVD OUTFALL



CHURCH STREET OUTFALL



NEW ROCHELLE MARINA OUTFALL



GLEN ISLAND / WOODLAND AVE OUTFALL

